velopment and function of muscles in frog embryos. The following results may be noted:—

1. All muscles develop normally, but less rapidly in the nerveless embryos than in the normal.

2. In normal embryos the nervous connection with muscles precedes slightly the development of contractility in the muscles.

3. All muscles,—cardiac, axial, and appendicular,—differentiate independently of nervous connection.

4. Embryonic cardiac muscles will contract spontaneously and rhythmically without nervous control; axial muscles will not contract spontaneously but will respond to direct mechanical stimulation; appendicular muscles are dependent on the nervous system for stimulation until late in development.

CULTIVATION OF TISSUES IN ALIEN SERA

Lambert and Hanes (Jour. Exp. Med., Aug., 1911), following up many unsuccessful efforts to secure growth of animal tissues in species different from that from which they were derived, have reported undertaking to grow such tissues outside the body in plasma from alien species. They found that rat sarcoma may be cultivated in mouse and guinea pig plasma for 30 days or more; in rabbit plasma, more slowly for 12 days; in dog plasma, not at all; in human plasma (the fibrin was liquified), the cells outwandered and formed giant cells after 4 to 6 days. Mouse sarcoma and tissues of rat spleen were used with much the same results. Transplantation back to homologous serum was the test of the retention of reproductive vitality.

SELECTIVE MATING IN PARAMECIA

In an elaborate paper (Jour. Exp. Zool., July, 1911) Prof. H. S. Jennings gives the results of experiments in assortative mating among Paramecia, and its products. It is impossible to do justice in a brief abstract to the luminous presentation in this paper, but the main results (parts of which corroborate the work of Pearl and others) may be summarized as follows:—

1. In cultures consisting of progeny of one individual or of a mixture of races, it is the rule that the members of conjugating pairs